

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-26 (Previously Cancelled)

27. (Currently Amended) A management entity in a communication network, the communication network comprising network elements, including provisioning nodes and provisioned nodes, the management entity having a provisioning node side for provisioning a service towards a network element by sending provisioning orders, the management entity supporting a Subscription Management Generic Interface (SuM-GI) that includes a SuM-GI Data Model, the management entity comprising:

a number of protocol adapters, each protocol adapter for communication with a specific protocol technology, at least one protocol adapter for communicating with a specific protocol technology used at the network element;

a SuM-GI manager for sending provisioning orders to create and manage subscriptions to services in the network element through the at least one protocol adapter with a number of SuM-GI operations Operations operating on Objects Classes included in the SuM-GI Data Model, and independently from an internal data model used by the network element; and

means for communicating over a communication network with a mapping module in the network element Network Element for mapping a provisioning order received from the SuM-GI Manager into a number of internal operations operating on an internal data model supported by the network element Network Element and for the network element Network Element to register itself at the SuM-GI Manager and for establishing the specific protocol technology used at the network element Network Element,

and wherein the SuM-GI Data Model comprises at least one Object Class selected from:

SubscriptionIRP object class, for indicating to the SuM-GI manager a SuM-GI version supported by each particular SuM-GI agent in a managed entity, and thus arranged for comprising a list of the SuM-GI versions supported by known SuM-GI agents;

SubscriptionFunction object class, for sub-classing Subscription, Subscriber, User, and UserServicePreferences related object classes and arranged for providing attributes that are common to underlying managed Object Classes; and

ServiceProviderFunction object class, for sub-classing ProvidedService related object classes and arranged for providing attributes that are common to underlying managed Object Classes.

28. (Previously Presented) The management entity of claim 27, wherein the SuM-GI Data Model further comprises at least one managed Object Class selected from:

Subscription object class, for modeling the agreement or contract established between a subscriber and a service provider and arranged for containing all the information related with the subscription;

Subscriber object class, for identifying a subscriber holding a subscription with a service provider for a given service and arranged for registering a number of users allowed to use said given service;

ProvidedService object class, for modeling a service provider inventory of offered services and arranged for maintaining applicable capabilities of said offered services;

User object class, for identifying a user associated to a given subscriber and arranged for customizing particular user preferences for a given service; and

UserServicePreferences object class, for allowing a number of users associated with a subscriber to have particular service preferences and arranged for containing different service capabilities enabled for each user.

29. (Currently Amended) A network element where a service is provisioned to subscribers of a communication network, the network element supporting

a Subscription Management Generic Interface (SuM-GI) that includes a SuM-GI Data Model, the network element comprising:

at least one protocol adapter for communicating over a communications network with a particular protocol technology used by a management entity to send provisioning orders;

a SuM-GI agent for receiving provisioning orders with a number of SuM-GI Operations operating on Objects Classes included in the SuM-GI Data Model; and

a mapping module Mapping Module for mapping received instances of the SuM-GI Data Model into an internal data model, registering itself at the management entity Management Entity and establishing the particular protocol technology;

and wherein the SuM-GI Data Model comprises at least one Object Class selected from:

SubscriptionIRP object class, for indicating to a SuM-GI manager the SuM-GI version supported by each particular SuM-GI agent in a managed entity, and thus arranged for comprising a list of the SuM-GI versions supported by known SuM-GI agents;

SubscriptionFunction object class, for sub-classing Subscription, Subscriber, User, and UserServicePreferences related object classes and arranged for providing attributes that are common to underlying managed Object Classes; and

ServiceProviderFunction object class, for sub-classing ProvidedService related object classes and arranged for providing attributes that are common to underlying managed Object Classes.

30. (Previously Presented) The network element of claim 29 wherein the SuM-GI Data Model further comprises at least one managed Object Class selected from:

Subscription object class, for modeling the agreement or contract established between a subscriber and a service provider and arranged for containing all the information related with the subscription;

Subscriber object class, for identifying a subscriber holding a subscription with a service provider for a given service and arranged for registering a number of users allowed to use said given service;

ProvidedService object class, for modeling a service provider inventory of offered services and arranged for maintaining applicable capabilities of said offered services;

User object class, for identifying a user associated to a given subscriber and arranged for customizing particular user preferences for a given service; and

UserServicePreferences object class, for allowing a number of users associated with a subscriber to have particular service preferences and arranged for containing different service capabilities enabled for each user.

31. (Currently Amended) A method for provisioning services to subscribers of a communication network[[,]] ~~the method applying between utilizing a management entity, the communication network comprising network elements, including provisioning nodes and provisioned nodes, the management entity having a that has a provisioning node side intended for provisioning a service[[,]] and a number of managed entities each one having a provisioned node side intended for receiving provisioning orders from the management entity, the method comprising the steps of:~~

~~registering each managed entity Managed Entity of the number of managed entities Managed Entities with the management entity and establishing a specific protocol to acknowledging of each managed entity Managed Entity with the management entity Management Entity;~~

~~assigning a specific protocol technology for communication between a Subscription Management Generic Interface (SuM-GI) manager at a provisioning node side and each SuM-GI agent at respective provisioned node sides;~~

~~sending provisioning orders from the SuM-GI manager towards at least one SuM-GI agent with a number of SuM-GI Operations intended for operating on Object Classes included in a SuM-GI Data Model;~~

receiving the provisioning orders at a SuM-GI agent in the provisioned node side of at least one managed entity with a number of SuM-GI Operations operating on Object Classes included in the SuM-GI Data Model; and

mapping in said provisioned node side the provisioning order received from the SuM-GI manager with the SuM-GI Operations operating on Object Classes of the SuM-GI Data Model into a number of internal operations operating on an internal data model supported by the managed entity, and wherein the SuM-GI Data Model comprises at least one Object Class selected from:

SubscriptionIRP object class, for indicating to a SuM-GI manager the SuM-GI version supported by each particular SuM-GI agent in a managed entity, and thus arranged for comprising a list of the SuM-GI versions supported by known SuM-GI agents;

SubscriptionFunction object class, for sub-classing Subscription, Subscriber, User, and UserServicePreferences related object classes and arranged for providing attributes that are common to underlying managed Object Classes; and

ServiceProviderFunction object class, for sub-classing Provided Service related object classes and arranged for providing attributes that are common to underlying managed Object Classes.

32. (Previously Presented) The method of claim 31, wherein upon receipt of a provisioning order from a Subscription Management Generic Interface (SuM-GI) manager in a SuM-GI agent at a sub-network manager, the method further comprising the steps of:

transferring the provisioning order received from a first SuM-GI manager at a provisioning node side of a management entity or higher hierarchical managed entity towards a second SuM-GI manager at a provisioning node side of the current node;

assigning a specific protocol technology for communication between the second SuM-GI manager at the provisioning node side of the current node and each SuM-GI agent at respective provisioned node sides of lower hierarchical managed entities; and

sending provisioning orders from the second SuM-GI manager towards at least one SuM-GI agent at a provisioned node side of a lower hierarchical managed entity with a number of SuM-GI Operations for operating on Object Classes included in a SuM-GI Data Model.

33. – 34. (Previously Cancelled)

35. (Currently Amended) The method of claim 31, wherein the ~~Subscription Management Generic Interface (SuM-GI)~~ includes a SuM-GI Data Model further comprises comprising at least one managed Object Class selected from:

Subscription object class, for modeling the agreement or contract established between a subscriber and a service provider and arranged for containing all the information related with the subscription;

Subscriber object class, for identifying a subscriber holding a subscription with a service provider for a given service and arranged for registering a number of users allowed to use said given service;

ProvidedService object class, for modeling a service provider inventory of offered services and arranged for maintaining applicable capabilities of said offered services;

User object class, for identifying a user associated to a given subscriber and arranged for customizing particular user preferences for a given service; and

UserServicePreferences object class, for allowing a number of users associated with a subscriber to have particular service preferences and arranged for containing different service capabilities enabled for each user.

36. (Currently Amended) The method of claim 31, wherein the Subscription Management Generic Interface (SuM-GI) includes a SuM-GI Operation set for acting on [[a]] the SuM-GI Data Model and comprising any Operations selected from:

creating, modifying, removing and getting Subscriber;

creating, modifying, removing and getting User;

creating, modifying, removing and getting Provided Service.

creating, modifying, removing and getting Subscription;
adding, removing and getting User to or from a given Subscription; and
setting and getting User Service Preferences for a user under a given
Subscription;

37. (Previously Cancelled)

38. (Previously Presented) The method of claim 31, wherein the Subscription Management Generic Interface (SuM-GI) is arranged for holding specific attributes or characteristics of those objects included in the SuM-GI Object Model in a generic information placeholder associated to each particular object.

39. (Currently Amended) The method of claim 38, wherein the Subscription Management Generic Interface (SuM-GI) is arranged for allowing each individual SuM-GI agent to determine whether or not each particular attribute in a list of attributes is applicable in the node where the SuM-GI agent resides, the applicability depending on a specific internal data model stored in said node.

40. (Currently Amended) In a communication network, comprising network elements, including provisioning nodes and provisioned nodes, a management entity operating in a provisioning node and having a Subscription Management Generic Interface (SuM-GI), the SuM-GI comprising:

a SuM-GI Data Model and SuM-GI Operations for provisioning services to subscribers of the communication network wherein said Subscription Management Generic Interface (SuM-GI) operates in accordance with an Integration Reference Point (IRP) specification within an IRP Generic Network Resource Model, wherein the SuM-GI Data Model comprises at least one Object Class selected from:

SubscriptionIRP object class, for indicating to a SuM-GI manager the SuM-GI version supported by each particular SuM-GI agent in a managed entity, and thus

arranged for comprising a list of the SuM-GI versions supported by known SuM-GI agents;

SubscriptionFunction object class, for sub-classing Subscription, Subscriber, User, and UserServicePreferences related object classes and arranged for providing attributes that are common to underlying managed Object Classes; and

ServiceProviderFunction object class, for sub-classing ProvidedService related object classes and arranged for providing attributes that are common to underlying managed Object Classes.

41. (Previously Presented) The management entity of claim 27, wherein the Subscription Management Generic Interface (SuM-GI) includes a SuM-GI Operation set for acting on the SuM-GI Data Model and comprising Operations, selected from:

creating, modifying, removing and getting Subscriber;

creating, modifying, removing and getting User;

creating, modifying, removing and getting Provided Service.

creating, modifying, removing and getting Subscription;

adding, removing and getting User to or from a given Subscription; and

setting and getting User Service Preferences for a user under a given Subscription.

42. (Previously Presented) The management entity of claim 27, wherein both SubscriptionFunction and ServiceProviderFunction object classes inherit from a managed Object Class (ManagedElement) representing telecommunication equipment or network element related functions.

43. (Previously Presented) The network element of claim 29, wherein the Subscription Management Generic Interface (SuM-GI) includes a SuM-GI Operation set for acting on the SuM-GI Data Model and comprising Operations selected from:

creating, modifying, removing and getting Subscriber;

creating, modifying, removing and getting User;

creating, modifying, removing and getting Provided Service;
creating, modifying, removing and getting Subscription;
adding, removing and getting User to or from a given Subscription; and
setting and getting User Service Preferences for a user under a given Subscription.

44. (Previously Presented) The network element of claim 29, wherein both SubscriptionFunction and ServiceProviderFunction object classes inherit from a managed Object Class (ManagedElement) representing telecommunication equipment or network element related functions.

45. (Previously Presented) The method of claim 31, wherein at least one managed entity is a network element in which a given service is provisioned, and wherein a number of managed entities may optionally form a hierarchical sub-network manager structure interposed between a centralized management entity acting as a network manager, and a number of network elements, each sub-network manager comprising:

a SuM-GI manager, a SuM-GI agent and a number of protocol adapters, thus presenting a provisioned node side towards a provisioning node side at a network manager or at another sub-network manager, and a provisioning node side towards a provisioned node side at a network element or at another sub-network manager.

46. (Previously Presented) The use of claim 40, wherein both SubscriptionFunction and ServiceProviderFunction object classes inherit from a managed Object Class “ManagedElement” representing telecommunication equipment or network element related functions.